

516,419.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 December 2003 (11.12.2003)

PCT

(10) International Publication Number
WO 03/102536 A2

(51) International Patent Classification⁷:

G01N

(21) International Application Number: PCT/US03/16819

(22) International Filing Date: 30 May 2003 (30.05.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/385,018

31 May 2002 (31.05.2002) US

(71) Applicant (for all designated States except US): **WATERS INVESTMENTS LIMITED** [US/US]; 109 Lukens Drive, New Castle, DE 19720 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MALLET, Claude** [US/US]; 86 Church Street, Northborough, MA 01532 (US). **RUSSEL, Reb, J., II.** [US/US]; 20 Dewey Avenue, Attleboro, MA 02703 (US). **YARDLEY, Kurt** [US/US]; 4 Hovey Street, 2nd Floor, Newton, MA 02458 (US).

(74) Agents: **HANLEY, Elizabeth, A. et al.**; Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109 (US).

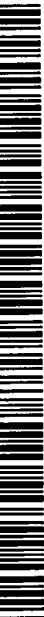
(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 03/102536 A2

(54) Title: DESTRUCTIBLE SURFACTANTS AND USES THEREOF

(57) **Abstract:** Destructible surfactants and methods of using same are provided. The invention includes anionic surfactants having a dioxolane or dioxane functional group that enable degradation of the surfactant under acidic conditions. The invention also includes methods of using anionic surfactants in a variety of applications relating to samples containing small molecules.